

Leluhelikvartetti (Toy Helicopter Quartet)

"Leluhelikvartetti is an homage to Karlheinz Stockhausen's concept of the Helikopter-Streichquartett, wherein the players of a string quartet are placed in a helicopter each, together with a pilot and a broadcasting engineer equipped with a camera. The sound and images of the quartet are broadcast to a nearby concert venue, where the audience can hear the instruments' sound mix with the sound of the helicopters outside and watch the musicians perform on giant screens.

Leluhelikvartetti uses, due to funding cuts in academia throughout Europe, toy helicopters. As the toy helicopters don't accommodate much personnel, some trickery is needed, whereby the individual instruments' sound will seemingly, as per magic*, come from the helicopters flying around the performance space.

The Free Improvisation String Quartet, (FISQ, Hermanni Yli-Tepsa: Violin, Dominik Schlienger: Viola, Sergio Castrillon: Cello; Timo Pyhälä: Bass), in a further protest against any rules and regulations, will not adhere to any form of score, but will happily take cues and inspiration from the flight of the toy 'copters, in an audio-kinaesthetic conversation with the pilots.

The sound of the helicopter blades mixes with the sound of the actual instruments, the trajectories of the players through the performance space intermingle with the public, the flight of the helicopters respond to the musical dynamic. "

*The magic

The performance space shall be a circular area of approx. 12 m diameter, wherein 4 toy quadcopters of type WLToys V262 are flown by 4 pilots, moving around freely. The audience surrounds this area. The players of FISQ are set-up somewhere at some distance from the performance area. Their instruments are close-miked, so that each instrument is available as one mono channel to the sound system at the centre of the performance space.

In the centre of the performance space stand 8 near coincident radially outwards facing loudspeakers of type Genelec 1029 or similar.

The loudspeakers send an acoustic measurement signal just above the frequency range audible to the human ear. (18 - 30 kHz)

The four toy helicopters are equipped with wireless microphones: Using time difference of arrival measurements by correlating the original signal on the loudspeakers with the measured signal on the helicopters, the positions in relation to the loudspeakers can be estimated.

The positions are then used to apply amplitude panning to the signal from the quartet's instruments, thus spatialising the quartet's sound as if each instrument was playing from one of the helicopters. (That is, for an audience surrounding the performance space.)

Further, the musicians of FISQ are also equipped with wireless audio senders, allowing them to move around freely during the performance.

The multiple layers of audio (Direct sound from the quartet; amplified sound through the loudspeaker array; the sound of the the helicopters) and the layers of movement (the helicopters trajectories; the musicians trajectories through the audience) create a densely woven spatial narrative.